

REMARKS

The Examiner's remarks about claim interpretation in paragraph 2 of the Office Action are correct. The claims are amended herein to clarify them substantially in accordance with the current interpretation.

REJECTIONS UNDER 35 U.S.C. 102(e)

Claims 1-14 are rejected under 35 U.S.C. 102(e) as anticipated by Chang. Claims 13 and 14 are canceled herein as redundant. The remaining claims are amended to more clearly identify the invention. Nonetheless, the rejections of claims 1-12 are also respectfully traversed, as the requirements of anticipation have not been met. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also MPEP 2131. Chang fails to teach the "tokens" and "related expressions" as taught by the present invention and precisely defined in the specification.

Chang describes a method for processing queries by using what is referred to as "canonical non-terminal representations" of data. This includes word stemming to produce a lexicon of normalized indexed word forms (column 2 lines 56-67), key value grouping (column 3 line 45-column 4 line 5), and synonym aliasing (column 5 lines 39-43). Chang's database aliasing resolves variations of spelling, capitalization, and abbreviations (column 9 lines 15-29) and expands synonyms into full designations (column 9 lines 52-54).

However, the present invention teaches tokens that can, in a very specific and novel manner, help identify relevant information in a queried document even if the information is in a form other than that of the original query terms. The tokens of the present invention have a

predetermined meaning and follow a predetermined format including predetermined keywords and identifiers to help improve query processing. Tokens help identify query terms related to time (time zones, time units, month, date, day of week, am or pm), distance and length, speed, temperature, currency, and IP addresses for example (see page 7 lines 15-20, and page 13 line 10 to page 15 line 29 of the specification). The present invention also teaches that the predetermined meaning of the tokens includes related expressions that permit a user to create a search query with a token when the user does not know how a desired expression was presented in a document (see page 7 line 28 to page 8 line 5). Chang does not teach tokens as defined in the present invention, and does not teach related expressions beyond the stemming and aliasing described above, and the handling of regular expressions as is known in the art (column 10 lines 65-67).

All pending claims are believed to be allowable as amended. The prior art made of record and not relied upon has been carefully considered. The Examiner is invited to call Applicants' undersigned representative if a telephone conference will expedite the prosecution of this application.

Respectfully submitted,

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Current claims:

1. (Currently Amended) A method, performed by a search engine, comprising:

determining tokens;

assigning related expressions to each of the tokens responsive to the determining to

define each of the tokens;

searching documents responsive to the assigning;

identifying occurrences of any of the related expressions for any of the tokens in any
of the documents responsive to the searching; and

assigning each of the documents, having at least one of the related expressions for at
least one of the tokens, to the at least one of the tokens responsive to the
identifying to create an index.

2. (Currently Amended) The method of claim 1 wherein the tokens describe at least one of:
time zones, time units, month, date, day of the week, distance, length, speed, temperature,
currency, IP address.

3. (Currently Amended) The method of claim 1 wherein the related expressions for each of
the tokens is different for each of the tokens.

4. (Currently Amended) The method of claim 1 further comprising assigning related tokens to
one of the tokens responsive to the assigning related expressions to further define the one of
the tokens.

5. (Currently Amended) The method of claim 1 wherein the indexing further comprises organizing the related expressions for each of the tokens in the index.
6. (Currently Amended) The method of claim 1 further comprising providing information about the tokens to a user of the search engine.
7. (Currently Amended) A method, performed by a search engine, comprising:
- receiving a search query;
 - identifying at least one token in the search query responsive to the receiving, wherein related expressions are assigned to the at least one token;
 - finding the at least one token in an index to identify documents, having an occurrence of at least one of the related expressions for the at least one token,
 - corresponding to the at least one token responsive to the identifying; and
 - providing information related to the documents responsive to the finding.
8. (Currently Amended) The method of claim 7 wherein the identifying further comprises detecting a predetermined character that identifies one or more keywords as the at least one token.
9. (Currently Amended) The method of claim 7 further comprising providing feedback related to the accuracy of the at least one token.
10. (Currently Amended) A method, performed by a search engine, comprising:

performing a background routine, during a first amount of time, including

- (a) determining tokens;
- (b) assigning related expressions to each of the tokens responsive to the determining to define each of the tokens;
- (c) searching documents responsive to the assigning;
- (d) identifying occurrences of any of the related expressions for any of the tokens in any of the documents responsive to the searching; and
- (e) indexing each of the documents, having at least one of the related expressions for at least one of the tokens, corresponding to the at least one of the tokens responsive to the identifying; and

performing a foreground routine, during a second amount of time substantially less than the first amount of time, including

- (f) receiving a search query;
- (g) identifying at least one token in the search query responsive to the receiving;
- (h) finding the at least one token in an index to identify documents, having an occurrence of at least one of the related expressions for the at least one the token, corresponding to the at least one the token responsive to the identifying the at least one token; and
- (i) providing information related to the documents responsive to the finding.

11. (Currently Amended) A method, performed by a user interface device, comprising:

receiving from an input source a search query that includes at least one token,
wherein related expressions are assigned to the at least one token;
sending the search query to a search engine responsive to the receiving; and
receiving from the search engine information related to documents, having an
occurrence of at least one of the related expressions for the at least one the
token, responsive to the sending.

12. (Currently Amended) A system for searching and retrieving documents comprising:

a database for storing documents;

a memory device for storing software, tokens, and an index, wherein the software

includes a background routine and a foreground routine, wherein each token
has related expressions assigned thereto, wherein the index has documents,
having an occurrence of at least one of the related expressions for at least one
of the tokens, assigned to the at least one of the tokens;

a user interface device for accepting and sending search queries having at least one
token and for receiving information related to the documents, having an
occurrence of at least one of the related expressions for the at least one of the
token; and

a controller electrically coupled to the memory device, the user interface device and
the database, for managing communications between the memory device and
the user interface device responsive to the foreground routine to respond to
the search queries having the token, and for managing communications

between the memory device and the database responsive to the background routine to create the index.

13-14. (Canceled)